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NATIONAL BUREAU OF STANDARDS

SPECIAL PUBLICATION **315-3**

BIBLIOGRAPHY ON THE HIGH TEMPERATURE CHEMISTRY AND PHYSICS OF MATERIALS

JULY, AUGUST, SEPTEMBER 1969

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BIBLIOGRAPHY ON THE HIGH TEMPERATURE CHEMISTRY AND PHYSICS OF MATERIALS

July, August, September 1969

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Washington, D. C. 20234

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Contents

Part I. Solids and Liquids

Page
- A. Devices for achieving temperatures above 1500 °C ---- 1
- B. Devices for measuring and controlling temperatures above 1500 °C ---- 2
- C. Devices for physical measurements at temperatures above 1000 °C ---- 3
- D. Thermodynamic properties, at temperatures below 1000 °C, of materials which melt above 1500 °C ---- 6
- E. Properties, at temperatures above 1000 °C, of materials which melt above 1500 °C ---- 7
  - a. Metallic materials ---- 7
  - b. Non-metallic materials ---- 11
  - c. Mixed materials ---- 15
- F. Properties, at temperatures above 1000 °C, of materials which melt below 1500 °C ---- 15
  - a. Metallic materials ---- 15
  - b. Non-metallic materials ---- 17
  - c. Mixed materials ---- 19
- G. Phase equilibria above 1000 °C ---- 19
- H. Reactions at temperatures above 1000 °C ---- 30
- I. Books ---- 47

Part II. Gases

- A. Spectroscopy of interest to high temperature chemistry ---- 48
- B. Reaction between gases and condensed phases ---- 71

PREFACE

This is one of a series of current-awareness bibliographies on high-temperature chemistry and physics published under the auspices of the Commission on High Temperatures and Refractories of the International Union of Pure and Applied Chemistry. The first issue covered the period October-December 1957 and, with several changes in title, format and content, the series has appeared quarterly since that time. It acquired its present format and status as a National Bureau of Standards publication with the issue covering the fourth quarter of 1968.

It is compiled by an International Working Group on Bibliographies, attached to the Commission, consisting of about fifteen scientists. Part I is compiled by the Contributors scanning the pertinent journals published in their countries and in some cases, of adjacent countries, while the literature of other countries is covered by the editor, mainly from published lists of tables of contents. Part II is obtained by searching Chemical Abstracts.

With very few exceptions, abbreviations of journal names follow the usage of Chemical Abstracts. Journal names using non-Roman alphabets are transliterated when the original is being referenced. In those cases where translation journals are referenced its name and pagination are used.

All titles are translated into English. Translations are by the contributors, the editor, Chemical Abstracts, or those published in table of contents lists.

Bibliography on the High Temperature Chemistry and Physics of Materials

July, August, September 1969

J. J. Diamond, Editor

The bibliography consists of references to research involving temperatures above 1000 °C, which were noted by the Contributors during the above three-month period. Since this is intended primarily as a current-awareness bibliography, there is no cross-referencing or indexing. This issue contains about 825 references roughly grouped under fifteen subject headings.

Key words: Bibliography, high temperature; chemistry, high temperature; high temperature chemistry; materials properties; research at high temperatures; thermophysical properties.

Part I. SOLIDS AND LIQUIDS

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J. Belle (Bettis At. Power Lab., West Miflin, Pa. 15122)
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G. A. Bennet (Electr. Eng. Dept., Univ. of Glasgow, Engl.)
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A. B. Chase and J. A. Osmer (Aerospace Corp., Los Angeles, Calif. 90045)
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L. Clark and J. Woods (Appl. Phys. Dept., Univ. of Durham, Engl.)
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B. Cockayne (Royal Radar Est., Malvern, Worcs., Engl.)
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W. Class (Mater. Res. Co., Orangeburg, N. Y. 10962)
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R. Darras and H. Loriers (C.E.N. Saclay, 91-Gif sur Yvette, Fr.)
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T. El Gammal and H. Schenck (Inst. Eisenhüttenw., Rhein.-Westfäl. Tech. Hochschule, Aachen, Germ.)
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F. Emmenegger (Lab. RCA, Zürich, Switz.)
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R. B. Evans, III, L. D. Love and E. H. Kobisk (Oak Ridge Nat. Lab., Oak Ridge, Tenn. 37830)
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I. M. Fedorchenko, I. I. Ivanova and O. I. Fushchich (Acad. Sci., Mat. Tech. Inst., Kiev, UkSSR)
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M. A. Field
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G. L. Fisher (INCO Res. Lab., Sterling Forest, Suffern, N. Y.)
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J. G. Grabmaier (Forschungslab. München, Siemens AG, 8 Munich, Germ.)
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D. Graham (NASA Lewis Res. Ctr., Cleveland, Ohio 44135)
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K. Hanusch and H. Winterhager (Inst. Metallhüttenw. u. Elektromet., Rhein.-Westfäl. Tech. Hochschule Aachen, Germ.)
Chem.-Ing.-Tech. 41, 687-88 (1969)

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P. Hembree and J. B. Wagner, Jr. (Mater. Sci. Dept., Northwestern Univ., Evanston, Ill.)
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Th. Heumann, H. W. Schleicher and H. Venker (Inst. Metallforsch., Univ. Münster, Germ.)
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G. J. Hill (Electr. Res. Assoc., Leatherhead, Surrey) and B. M. Wanklyn (Clarendon Lab., Phys. Dept., Univ. of Oxford, Engl.)
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S. Hornfeldt, J. B. Ketterson and L. R. Windmiller (Argonne Nat. Lab., Argonne, Ill. 60439)
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J. Kaspar (Inst. Solid State Phys., Czech. Acad. Sci., Prague)
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H. E. LaBelle, Jr. and A. I. Mlavsky (Tyco Labs., Waltham, Mass. 02154)
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J. Liebertz (Philips Zentrallab. GmbH, Weisshausstr. 51, Aachen, Germ.)
J. Crystal Growth 5 [2], 150 (1969)

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R. C. Linares (Perkin-Elmer Co., Norwalk, Conn. 06852)
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W. Löscher (Hoesch AG Hüttenwerke, Dortmund, Germ.)
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N. P. Luzhnaya (Inst. Gen. and Inorg. Chem., Acad. Sci. USSR, Moscow)
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V. D. Lyubimov, P. V. Geld, G. D. Bogomolov, V. A. Tskhai and G. P. Shveikin
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K. J. D. MacKenzie (Chem. Dept., Victoria Univ. of Wellington, New Zealand)
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R. L. Magunov, O. V. Zakolodiazhnaya, N. M. Bondar and M. N. Puring (Acad. Sci., Inst. Gen. & Inorg. Chem., Kiev, UkSSR)
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R. C. Marshall (A. F. Cambridge Res. Lab., Bedford, Mass. 01730)
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Y. Mary (Lab. Chim. Minér., Sorbonne, Paris)
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H. Matzke (Chem. Dept., CCR Euratom, Ispra (Varese), Italy)
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G. S. Meiling and R. Leombruno (Corning Glass Works, Corning, N. Y. 14830)
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P. A. Nelson, D. E. Grosvenor, S. Vogler, N. P. Quattropani and P. W. Krause (Argonne Nat. Lab., Argonne, Ill.)
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K. F. Nielsen (Phys. Dept. Sect. III, Tech. Univ. of Denmark, Lyngby, Denmark)
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T. Niemyski (Inst. Electron Tech., Polish Acad. Sci., Warsaw) and E. Kierzek-Pecold (Inst. Phys., Polish Acad. Sci., Warsaw)
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W. Oelsen and H. G. Schubert (Max Planck Inst. Eisenforsch., Düsseldorf) and O. Oelsen (Werk Ruhrort, A. Thyssen-Hütte AG, Duisburg-Meiderich, Germ.)
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W. Oelsen, H. G. Schubert and K. Klein (Max Planck Inst., Eisenforsch., Düsseldorf, Germ.)
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A. K. Orlov and J. H. E. Jeffes (Met. Dept., Imperial College, London, SW 7)
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C. Paorici (Ist. Fis., Univ. di Parma, Italy)
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R. L. Pastorek and R. A. Rapp (Met. Eng. Dept., Ohio State Univ., Columbus, Ohio)
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J. Pelleg (Structures and Mater., Nat. Aeronaut. Establ., Nat. Res. Council, Ottawa, Can.)
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J. Pelleg and G. M. Lindberg (Nat. Aeronaut. Estab., Nat. Res. Council, Ottawa, Can.)
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M. D. Pepper and B. L. Daniell (Met. Dept., Univ. of Surrey, Guildford, U. K.)
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H. Pink (Forschunglab., Siemens A.G., München, Germ.)
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S. S. Pollack (Mellon Inst., Carnegie-Mellon Univ., Pittsburgh, Pa. 15213) and P. S. DeCarli (Stanford Res. Inst., Menlo Park, Calif. 94025)
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A. A. Popova (Inst. Cryst., Acad. Sci. USSR, Moscow)
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